

Glossary for Voting Systems

This glossary contains terms from the VSS-2002 as well as the inclusion of additional terms needed to understand voting and related areas such as security, human factors, and testing. Each term includes a definition and its source as well as an association, where

- Source is the source from which the definition originates. A list of these sources is found in Appendix A.
- Association is the domain for which the term applies, e.g., voting, testing, security. There may be multiple domains identified for a term. There is no relevance given to the order in which the domains are listed. A list of these associations is found in Appendix B.

Additionally within the definition of some terms, a word or words may be in *italics*. This is an indication that the word/words are also defined in this glossary. At this time, a term may contain multiple definitions. The intent is to eventually select one definition per term, unless multiple definitions are necessary to convey the appropriate meanings of the term.

Some of the terms in the 2002 VSS have been deprecated due to changes in voting systems, voting process and/or mandates in HAVA. A list of these deprecated terms is in Appendix C: List of Deprecated Terms.

A

Abandoned Ballot: *Ballot* that the voter did not cast into the ballot box or record vote on *DRE* before leaving the *polling place*. See also *fled voter*.

Association: voting

Source: no attribution

Absentee Ballot: *Ballot* prepared or cast by a voter other than at a regular *polling place*.

Association: voting

Source: VSS, IEEE 1583

Acceptance Testing: Examination of a voting system and its components by the purchasing election authority (usually in a simulated-use environment) to validate performance of delivered units in accordance with procurement requirements, and to validate that the delivered system is, in fact, the certified or qualified system purchased.

Association: testing, voting

Source: VSS

Access Board: Independent federal agency devoted to accessibility for people with disabilities.

Association: human factors, HF: accessibility

Source: no attribution

Accessibility: Measurable characteristic that indicates the degree to which a system is available to, and usable by, individuals with disabilities. The most common disabilities include those associated with vision, hearing and mobility, as well as cognitive disabilities. The HAVA also includes accessibility requirements for Native American and Alaska Native citizens and alternative language access for voters with limited English proficiency.

Association: human factors, HF: accessibility

Source: NIST HF Rpt, HAVA

Accreditation: (1) Formal recognition that a laboratory is competent to carry out specific tests or calibrations or types of tests or calibrations. (2) Procedure by which an authoritative body gives formal recognition that a body or person is competent to carry out specific tasks.

Association: testing, standardization

Source: (1) NIST HB 150, (2) ISO Guide 2-6

Accreditation Body: (1) Authoritative body that performs accreditation. (2) An independent organization responsible for assessing the performance of other organizations against a recognized standard, and for formally confirming the status of those that meet the standard.

Association: testing, conformity assessment

Source: (1) ISO 17000, (2) IEEE 1583

Accuracy: (1) Extent to which a given measurement agrees with an accepted standard for that measurement. (2) Closeness of the agreement between the result of a measurement and a true value of the particular quantity subject to measurement. NOTE 1: *Accuracy* is a qualitative concept. NOTE 2: The term *precision* should not be used for *accuracy*.

Association: testing

Source: (1) IEEE 1583, (2) VIM

Accuracy for Voting Systems: Ability of the system to capture, record, store, consolidate and report the specific selections and absence of selections, made by the voter for each ballot position without error. Required accuracy is defined in terms of an error rate that for testing purposes represents the maximum number of errors allowed while processing a specified volume of data.

Association: voting, testing

Source: VSS

Adequate Security: Security commensurate with the risk and the magnitude of harm resulting from the loss, misuse, or unauthorized access to or modification of information. See also *risk assessment*.

Association: computer security

Source: OMB A130

Alternate Formats: In the context of voting systems, the ballot or accompanying information is said to be in an alternate format if it is in a representation other than the written English normally displayed to non-disabled English-literate voters. The usual purpose of these formats is to provide accessibility to voters with disabilities or those with limited English proficiency. Examples include, but are not limited to, Braille, ASCII text, large print, recorded audio, and electronic formats that provide enhanced contrast or other assistive adaptations.

Association: HF: accessibility

Source: IEEE 1583, Section 508

Approval: Permission for a product or process to be marketed or used for stated purposes or under stated conditions. NOTE: Approval can be based on fulfillment of specified requirements or completion of specified procedures.

Association: testing, conformity assessment

Source: ISO 17000

Attestation: Issue of a statement, based on a decision following review, that fulfillment of specified requirements has been demonstrated. NOTE: The resulting statement is also known as a *statement of conformity*.

Association: testing, conformity assessment

Source: ISO 17000

Audio Ballot: Voter interface which provides the voter with audio stimuli and allows the voter to communicate intent to the voting system through vocalization or physical actions. See also *ballot*.

Association: voting, human factors, HF: accessibility

Source: FL Statutes

Audit: Systematic, independent, documented process for obtaining records, statements of fact or other relevant information and assessing them objectively to determine the extent to which specified requirements are fulfilled. NOTE: While *audit* applies to management systems, *assessment* applies to conformity assessment bodies as well as more generally.

Association: testing, conformity assessment, security

Source: ISO 17000

Audit Trail: Recorded information that allows election officials to view the steps that occurred on the equipment included in an election to verify or reconstruct the steps followed without compromising the ballot or voter secrecy.

Association: voting, security

Source: no attribution

Audit Trail for DRE: Paper printout of votes cast, produced by direct response electronic (DRE) voting machines, which election officials may use to crosscheck electronically tabulated totals.

Association: voting, security

Source: NASS

Availability: Ensuring timely and reliable access to and use of information.

Association: security

Source: 44 U.S.C.

B

Ballot: (1) Physical form (e.g., paper, card, tape) presenting a sequence of contests, ballot measures or both. Traditionally paper, but may take other forms such as an electronic image, audio format, or a video format. (2) Official election presentation of offices and candidates, including write-in candidates and of questions and issues, and the means by which votes are recorded. See also *audio ballot*, *ballot image*, *video ballot*, *electronic voter interface*.

Association: Voting

Source: (1) NIST HF Rpt, (2) OH Statutes

Ballot Configuration: Combination of contests, ballot measures, or both that is unique to a particular political subdivision, precinct or portion of precinct in a particular election.

Association: voting

Source: VSS

Ballot Counter: Counter in a voting device that counts the ballots cast in a single election or election test.

Association: voting

Source: VSS

Ballot Counting Logic: Software logic that defines the combinations of voter choices that are valid and invalid on a given ballot and that determines how the vote choices are totaled in a given election. States differ from each other in the way they define valid and invalid votes and in their vote-counting procedures.

Association: voting

Source: VSS

Ballot Form: Abstract definition of what appears on the ballot in a particular political subdivision, precinct or portion of a precinct in a particular election and the formatting thereof.

Association: voting

Source: no attribution

Ballot Format: One of any number of specific ballot configurations issued to the appropriate precinct. At a minimum, ballot formats differ from one another in content. They may also differ in size of type, graphical presentation, language used, or method of presentation (e.g., visual or audio). Also referred to as *ballot style*.

Association: voting

Source: VSS

Ballot Image: (1) Electronically produced record of all votes cast by a single voter. (2) Record of all votes produced by a single voter. See also *Cast Vote Record*

Association: voting

Source: (1) VSS (2) no attribution

Ballot Instructions: Instructional text that appears at the top of the ballot.

Association: voting

Source: no attribution

Ballot Measure: Legislation pertaining to the adoption of laws and/or amendments to state constitutions that appears on the ballot for approval or rejection.

Association: voting

Source: no attribution

Ballot Preparation: Process of using election databases or other means to select the specific contests and questions to be contained in a ballot format and related instructions; preparing and testing election-specific software containing these selections; producing all possible ballot formats; and validating the correctness of ballot materials and software containing these selections for an upcoming election.

Association: voting

Source: VSS

Ballot Position: Abstract choice that is represented by a single line item where a vote may be recorded in a ballot or ballot image.

Association: voting

Source: VSS

Ballot Production: Process of converting the ballot format to a media ready for use in the physical ballot production or electronic presentation.

Association: voting

Source: VSS

Ballot Rotation: Process of varying the order of the candidate names within a given contest to reduce the impact of voter bias towards the candidate(s) listed first.

Association: voting

Source: VSS

Ballot Set: See *ballot image*.

Association: voting

Source: VSS

Ballot Scanner: Device used to read the data from a *marksense* ballot.

Association: voting

Source: VSS

Ballot Style: See *ballot format*.

Association: voting

Source: VSS

Baseline: Product configuration that has been formally submitted for review against the Standards, which thereafter serves as the basis for further development; and can be changed and offered to jurisdictions only through formal change control and requalification procedures (and/or recertification procedures where applicable).

Association: voting, testing

Source: VSS

C

Calibration: Set of operations that establish, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system, or values represented by a material measure, and the corresponding known values of a quantity intended to be measured.

Association: testing

Source: NIST HB 150

Candidate: Person contending in a race for office. A candidate may be explicitly presented as one of the choices on the ballot or may be a write-in candidate.

Association: voting

Source: NIST HF Rpt

Candidate Register: Record that reflects the total votes cast for the candidate. This record is augmented as each ballot is cast on a DRE or as digital signals from the conversion of voted paper ballots are logically interpreted and recorded.

Association: voting

Source: VSS, IEEE 1583

Canvass: (1) Compilation of election returns and validation of the outcome that form the basis of the official results by political subdivision. (2) Compilation of election returns for validation and approval by the political subdivision of the outcome, which form the basis for the official results.

Association: voting

Source: (1) VSS, IEEE 1583 (2) no attribution

Cast Ballot: Ballot in which voter has taken final action in the selection of candidates and measures and submits the ballot to the appropriate jurisdiction.

Association: voting

Source: no attribution

Cast Vote Record (CVR): Permanent record of all votes produced by a single voter whether in electronic or paper copy form. Used for counting votes. Also referred to as *ballot set* or *ballot image* when used to refer to electronic ballots.

Association: voting

Source: (1) IEEE 1583

Catastrophic System Failure: Total loss of function or functions, such as the loss or unrecoverable corruption of voting data or the failure of an on-board battery of volatile memory.

Association: voting

Source: VSS

Central Counting: Counting of ballots in one or more locations selected by the election authority for the processing or counting, or both, of ballots.

Association: voting

Source: IL Statutes

Certification: (1) Procedure by which a third party gives written assurance that a product, process or service conforms to specified requirements. (2) Third-party attestation related to products, processes, systems or persons. See also *State Certification* and *EAC Certification*.

Association: testing, conformity assessment

Source: (1) ISO Guide 2-6, (2) ISO 17000

Certification Testing: Deprecated, replaced by *State Certification*. Note: This term is being clarified with respect testing to State or Federal Standards. See also *EAC Certification*.

Association: testing, conformity assessment, voting

Source: VSS

Challenged Ballot: Ballot provided to individuals whose eligibility to vote has been questioned. Once voted, such ballots are not included in the tabulation until after the voter's eligibility is confirmed. See also *provisional ballot*.

Association: voting

Source: VSS

Checksum: Computed value representing the sum of the contents of an instance of digital data; used to check whether errors have occurred in transmission or storage.

Association: security

Source: no attribution

Claim of Conformance: Statement by a vendor proclaiming that a specific product conforms to a particular standard or set of standard profiles, a claim which is verified or refuted by a testing authority.

Association: testing, conformity assessment

Source: no attribution

Client: Any person or organization that engages the services of a testing or calibration laboratory.

Association: testing

Source: NIST HB 150

Closed Primary: Primary election in which voters receive a ballot listing only those candidates running for office in the political party with which the voters are affiliated, along with nonpartisan offices and ballot issues presented at the same election.

Association: voting

Source: VSS

Commercial Off-the-Shelf (COTS): Commercial, readily available hardware devices (which may be electrical, electronic, mechanical, etc.; such as card readers, printers, or personal computers) or software products (such as operating systems, programming language compilers, database management systems, subsystems, components; software, etc.).

Association: IT

Source: VSS, IEEE 1583

Compliance point: Identified, testable requirement.

Association: testing, conformity assessment

Source: no attribution

Component: (1) Element within a larger system; a component can be hardware or software. For hardware, a physical part of a subsystem that can be used to compose larger systems (e.g., circuit boards, internal modems, processors, computer memory). For software, a module of executable code that performs a well-defined function and interacts with other components. (2) Individual elements or items that collectively comprise a device, e.g., circuit boards, internal modems, processors, disk drives, and computer memory.

Association: IT

Source: (1) no attribution, (2) VSS

Confidentiality: (1) Prevention of unauthorized disclosure of information. (2) Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information.

Association: security.

Source: (1) IEEE 1583, (2) 44 U.S.C.

Configuration Identification: Element of configuration management, consisting of selecting the configuration items for a system and recording their functional and physical characteristics in technical documentation.

Association: testing, software engineering

Source: IEEE 1583

Configuration Item: Aggregation of hardware, software, or both that is designated for configuration management and treated as a single entity in the configuration management process.

Association: testing, software engineering

Source: IEEE 1583

Configuration Management: Discipline applying technical and administrative direction and surveillance to identify and document functional and physical characteristics of a configuration item, control changes to these characteristics, record and report change processing and implementation status, and verify compliance with specified requirements.

Association: testing, software engineering

Source: IEEE 1583

Configuration Management Plan: Document detailing the process for identifying, controlling and managing various released items (code, hardware, documentation etc.)

Association: testing, software engineering

Source: IEEE 1583

Conformance: see *conformity*

Association: testing, standardization

Source: no attribution

Conformance Testing: Process of testing an implementation against the requirements specified in one or more standards. The outcomes of a conformance test are generally a pass or fail result, possibly including reports of problems encountered during the execution. Also known as *conformity assessment*.

Association: testing, standardization

Source: NIST HB 150

Conformity: Fulfillment by a product, process or service of specified requirements.

Association: testing, standardization

Source: ISO Guide 2-6

Conformity Assessment: Demonstration that specified requirements relating to a product, process, system, person or body are fulfilled. See also *testing, inspection, certification, accreditation, conformity assessment bodies*.

Association: testing, standardization
Source: ISO 17000

Conformity Assessment Body: Body that performs conformity assessment services.

NOTE: An accreditation body is not a conformity assessment body.

Association: testing, standardization
Source: ISO 17000

Consensus: General agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments.

Association: standardization
Source: ISO Guide 2-4

Contest: Decision to be made within an election, which may be a race for office or a referendum, propositions and/or questions. A single ballot may contain one or more contests.

Association: voting
Source: no attribution

Count: Process of totaling votes.

Association: voting
Source: VSS, IEEE 1583

Counted Ballot: Ballot that has been processed and whose votes are included in the candidate and measures vote totals.

Association: voting
Source: no attribution

Corrective Action: Action taken to eliminate the causes of an existing deficiency or other undesirable situation in order to prevent recurrence.

Association: testing
Source: NIST HB 143

Cross Filing: see *Cross-party Endorsement*.

Association: voting
Source: VSS

Cross-party Endorsement: Endorsement of a single candidate or slate of candidates by more than one political party. The candidate or slate appears on the ballot representing each endorsing political party. Also referred to as *cross filing*.

Association: voting
Source: VSS, IEEE 1583

Cryptographic Key: Value used to control cryptographic operations, such as decryption, encryption, signature generation or signature verification.

Association: security

Source: NIST SP 800-63

Cryptography: Discipline that embodies the principles, means, and methods for the transformation of data in order to hide their semantic content, prevent their unauthorized use, or prevent their undetected modification.

Association: security

Source: NIST SP 800-59

Cumulative Voting: Practice where voters are permitted to cast as many votes as there are seats to be filled. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidates.

Association: voting

Source: VSS, IEEE 1583

D

Data Accuracy: (1) Data accuracy is defined in terms of ballot position error rate. This rate applies to the voting functions and supporting equipment that capture, record, store, consolidate and report the specific selections, and absence of selections, made by the voter for each ballot position. (2) The system's ability to process voting data absent internal errors generated by the system. It is distinguished from *data integrity*, which encompasses errors introduced by an outside source.

Association: testing, security

Source: (1) VSS, (2) IEEE 1583

Data Integrity: Invulnerability of the system to accidental intervention or deliberate, fraudulent manipulation that would result in errors in the processing of data. It is distinguished from data accuracy that encompasses internal, system-generated errors.

Association: security

Source: IEEE 1583

Decertification: Withdrawal of certification of voting system hardware and software.

Association: testing, conformity assessment

Source: HAVA

Design Entity: Component of a design, named and referenced uniquely, that is both structurally and functionally different from other elements.

Association: software engineering

Source: IEEE 1583

Design Entity Attributes: Named characteristic or property of a design entity, which provides a statement of fact about the entity. Attributes define the design entity and not the design process.

Association: software engineering

Source: IEEE 1583

Designating Authority: Body established within government or empowered by government to designate conformity assessment bodies, suspend or withdraw their designation or remove their suspension from designation.

Association: testing, conformity assessment

Source: ISO 17000

Designation: Governmental authorization of a conformity assessment body to perform specified conformity assessment activities.

Association: testing, conformity assessment

Source: ISO 17000

Device: Functional unit that performs its assigned tasks as an integrated whole.

Association: IT

Source: VSS

Digital Signature: Asymmetric key operation where the private key is used to digitally sign an electronic document and the public key is used to verify the signature. Digital signatures provide authentication and integrity protection.

Association: security

Source: SP 800-63

Direct Record Electronic (DRE) Voting System: Voting system that records votes by means of a ballot display provided with mechanical or electro-optical components that can be actuated by the voter, that processes the data by means of a computer program, and that records voting data and cast vote records in internal and/or external memory components. It produces a tabulation of the voting data stored in a removable memory component and/or in printed copy.

Association: voting

Source: VSS, IEEE 1583

Directly Verifiable: Voting system that allows the voter to verify at least one representation of his or her ballot with his/her own senses, not using any software or hardware intermediary. Examples of a directly verifiable voting system include *DRE* with a *voter verified paper trail* or *marksense* system. This is in contrast with an *indirectly verifiable* voting system.

Association: voting, security

Source: no attribution

Disability: Disability means, with respect to an individual, (a) a physical or mental impairment that substantially limits one or more of the major life activities of

such individual, (b) a record of such an impairment, or (c) being regarded as having such an impairment.

Association: human factors, HF: accessibility

Source: ADA

DRE Display: Part of the DRE that displays the electronic record.

Association: security, voting

Source: no attribution

DRE-VVPAT: DRE voting system containing VVPAT capability. See also *Direct Record Electronic Voting System* and *Voter Verified Paper Audit Trail*.

Association: security, voting

Source: no attribution

E

E-Voting: (1) Term frequently used to refer to DREs and other types of electronic voting equipment, but may be misleading as it implies remote access via a computer network or the Internet. (2) Election system that allows a voter to record his or her secure and secret ballot electronically. See also *DRE, Electronic Voting Machine*.

Association: voting

Source: (1) NASS, (2) Whatis.com

EAC: Election Assistance Commission

EAC Certification: To be defined

Association: voting, testing

Source: no attribution

Early Voting: Voter completes the ballot in person at a county office or other designated polling site or ballot drop site prior to Election Day. Also known as Early In-Person Voting or *On-Site Absentee Voting*.

Association: voting

Source: electionline

Election Coding: See *Election Programming*.

Association: voting

Source: IEEE 1583

Election Databases: Data file or set of files that contain geographic information about political subdivisions and boundaries, all contests and questions to be included in an election, and the candidates for each contest.

Association: voting

Source: VSS, IEEE 1583

Election Definition: Abstract definition of the races and questions that may appear on ballot forms.

Association: voting

Source: no attribution

Election District: Geographic area represented by a public official who is elected by voters residing within the district boundaries. The district may cover an entire state or political subdivision, may be a portion of the state or political subdivision, or may include portions of more than one political subdivision.

Association: voting

Source: VSS, IEEE 1583

Election Management System: Set of processing functions and databases within a Voting System that define, develop and maintain election databases, perform election definition and setup functions, format ballots, count votes, consolidate and report results, and maintain audit trails.

Association: voting

Source: VSS, IEEE 1583

Election Officials: Term used to designate the group of people associated with conducting an election, including election personnel and poll workers.

Association: voting

Source: no attribution

Election Programming: Process by which election officials or their designees use voting system software to logically define the ballot for a specific election.

Association: voting

Source: VSS, IEEE 1583

Electronic Ballot Printer (EBP): DRE-like device that fully prints paper-based ballots with selected vote choices for tabulation by a separate ballot scanner.

Association: voting

Source: IEEE 1583

Electronic Cast Vote Record (ECVR): Deprecated, replaced by *Cast Vote Record (CVR)*.

Association: voting

Source: IEEE 1583

Electronic Vote Capture System (EVCS): Election system that encompasses DREs as well as accessible ballot printers (ABPs) when they are combined with the ballot scanner that processes the printed ballot. See also *Voter Verified Paper Audit*.

Association: voting

Source: IEEE 1583

Electronic Voter Interface: Subsystem within a DRE voting system which communicates ballot information to a voter in video, audio or Braille form and which allows the voter to select candidates and issues by means of vocalization or physical actions.

Association: voting, Human factors, HF: accessibility

Source: FL Statutes

Electronic Voting Machine: Any system that utilizes an electronic component. Term is generally used to refer to DREs. See also *Voting Equipment*, *Voting System*.

Association: voting

Source: NASS

Electronically-Assisted Ballot Marker (EBM): Machines that provide assistance to voters who are visually impaired, who have difficulty reading English, or in other cases where a voter has difficulty correctly marking by hand a preprinted paper ballot that is to be counted in optical scan systems. The device marks, or helps to mark selected vote choices on a previously inserted, preprinted paper ballot. The machine then provides audio, tactile, or visual feedback to the voter on what choices they have made on the ballot. The resulting ballots are later tabulated on the same unit that processes ordinary hand-marked paper ballots.

Association: voting, human factors

Source: IEEE 1583

Entity Relationship Diagram (ERD): A data modeling technique that creates a graphical representation of the entities, and the relationships between entities, within an information system.

Association: software engineering

Source: IEEE 1583

Error correction code: Coding system that incorporates extra parity bits in order to detect errors.

Association: security

Source: WordNet

F

Federal Information Processing Standard (FIPS): Standard for adoption and use by federal agencies that has been developed within the National Institute of Standards and Technology (NIST) Information Technology Laboratory and published by NIST, an part of the U.S. Department of Commerce.

Association: security, standardization

Source: no attribution

Firmware: Computer programs (software) stored in read-only memory (ROM) devices embedded in the system and not capable of being altered during system operation.

Association: IT

Source: IEEE 1583

Fled Voter: Voter who has begun the process of using *voting equipment* to cast a ballot and has exited the polling site without completing the casting of the ballot, thereby leaving the voting equipment in a state in which election procedures must be used to decide whether the fled voter's incomplete ballot will be cast before the voting equipment is reset. See also *abandoned ballot*.

Association: voting

Source: no attribution

Font: Family or assortment of characters of a given size and style, e.g., *9-point Bodoni modern*. See *type font*.

Association: human factors, typography

Source: ANSI

Functional Configuration Audit (FCA): Exhaustive verification of every system function and combination of functions cited in the vendor's documentation. Through use the FCA verifies the accuracy and completeness of the system's Voter Manual, Operations Procedures, Maintenance Procedures, and Diagnostic Testing Procedures.

Association: testing, voting

Source: VSS, IEEE 1583

Functional Test: Test performed to verify or validate the accomplishment of a function or a series of functions.

Association: testing

Source: VSS, IEEE 1583

Fundamental Representation: For voting systems that create more than one representation of the voter's ballot (such as one electronic and one on paper), the fundamental representation is the representation that is used for the initial vote tabulation.

Association: voting, security

Source: no attribution

G

General Election: Election in which voters, regardless of party affiliation, are permitted to select persons to fill public office and vote on ballot issues. Where the public office may be filled by a candidate affiliated with a political party or when permitted by law, unaffiliated candidate and voters choose among the candidates.

Association: voting

Source: VSS, IEEE 1583

H

Hash: Algorithm that maps a bit string of arbitrary length to a fixed-length bit string. Approved hash functions satisfy the following properties: (a) it is computationally infeasible to find any input that map to any prespecified output, and (b) it is computationally infeasible to find any two distinct inputs that map to the same output.

Association: voting

Source: NIST SP 800-63

HAVA: Help America Vote Act of 2002.

Association: voting

Source: no attribution

Human Computer Interaction: Discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them.

Association: human factors

Source: ACM SIGCHI

Human Factors (or Ergonomics): Scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.

Association: human factors

Source: IEA

I

Indirectly Verifiable: Voting system that allows a voter to verify the ballot produced by his or her vote only via hardware or software intermediary. An example of an indirectly verifiable voting system is a touch screen DRE where the voter verifies the ballot through the assistance of audio stimuli. This is in contrast to *directly verifiable* voting systems.

Association: voting, security

Source: no attribution

Implementation Conformance Statement: See *Implementation Statement*.

Implementation Statement: Statement by a vendor indicating the capabilities, features, and optional functions as well as extensions that have been implemented. Also known as implementation conformance statement.

Association: testing

Source: no attribution

Independent Testing Authority (ITA): Deprecated, replaced by *Voting System Testing Laboratory*. Organization certified by the National Association of State Election Directors (NASD) to perform qualification testing.

Association: testing, voting

Source: VSS

Information Security: Protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide integrity, confidentiality, and availability.

Association: security

Source: 44 U.S.C.

Inspection: Examination of a product design, product, process or installation and determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements. NOTE: Inspection of a process may include inspection of persons, facilities, technology and methodology.

Association: testing, conformity assessment

Source: ISO 17000

Integrity: (1) Prevention of unauthorized modification of information. (2) Guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity.

Association: security

Source: (1) IEEE 1583, (2) 44 U.S.C.

K

Key Management: Activities involving the handling of *cryptographic keys* and other related security parameters (e.g., passwords) during the entire life cycle of the keys, including their generation, storage, establishment, entry and output, and zeroization.

Association: security

Source: FIPS 140-2

L

Logic and Accuracy Testing: Testing of the tabulator setups of a new election definition to ensure that the content correctly reflects the election being held (i.e., contests, candidates, number to be elected, ballot styles, etc.) and that all voting positions can be voted for the maximum number of eligible candidates and that results are accurately tabulated and reported.

Association: voting, testing

Source: IEEE 1583

Logical Correctness: Condition signifying that, for a given input, a computer program will satisfy the program specification (produce the required output).

Association: testing

Source: VSS, IEEE 1583

M

Marksense: System by which votes are recorded by means of marks made in voting response fields designated on one or both faces of a ballot card or series of cards. Marksense systems may use an optical scanner or similar sensor to read the ballots. Also known as *Optical Scan*.

Association: voting

Source: VSS, IEEE 1583

Measure Register: Record that reflects the total votes cast for and against a specific ballot issue. This record is augmented as each ballot is cast on a DRE or as digital signals from the conversion of voted paper ballots are logically interpreted and recorded.

Association: voting

Source: VSS, IEEE 1583

Mechanical Lever Voting Machine: Machine that directly records a voter's choices via mechanical level-actuated controls into a counting mechanism that tallies the votes without using a physical ballot.

Association: voting

Source: ME Statutes

Multi-seat Content: Contest in which multiple candidates can run, up to a specified number of seats. Voters may vote for no more than the specified number of candidates. Also known as field race.

Association: voting

Source: NIST HF Rpt.

N

NVLAP: The NIST National Voluntary Laboratory Accreditation Program.

Association: testing

Source: no attribution

Non-partisan Office: Elected office for which candidates run independent of political party affiliation.

Association: voting

Source: VS, IEEE 1583

Nonvolatile Memory: Memory in which information can be stored indefinitely with no power applied. Static RAM, ROMs and EPROMs are examples of nonvolatile memory.

Association: IT

Source: VSS, IEEE 1583

O

On-Site Absentee Voting: See *Early Voting*.

Open Primary: Primary election in which voters, regardless of political affiliation, may choose in which party's primary they will vote. Some states require voters to publicly declare their choice of party ballot at the polling place, after which the poll worker provides or activates the appropriate ballot. Other states allow the voters to make their choice of party ballot within the privacy of the voting booth. Voters also are permitted to vote on nonpartisan offices and ballot issues that are presented at the same election.

Association: voting

Source: VSS, IEEE 1583

Operational Environment: See *Voting Equipment Operational Environment*.

Association: voting, IT

Source: IEEE 1583

Operations Procedures: See *Voting Equipment Operations Procedures*.

Association: voting, IT

Source: IEEE 1583

Optical Scan, Optical Scan System: See *Marksense*.

Association: voting

Source: IEEE 1583

Overvotes: (1) Generally prohibited practice of voting for more than the allotted number of candidates for the office being contested. (2) The voting for more than the allotted number of selections in a race. (3) Occurs when the number of alternatives selected by a voter in a contest exceeds the maximum number allowed for that contest. Also known as overvoting.

Association: voting

Source: (1) VSS, (2) IEEE 1583, (3) NIST HF Rpt.

P

Paper-based Voting System: Voting system that records votes, counts votes, and produces a tabulation of the vote count, using one or more ballot cards or a written list of choices.

Association: voting
Source: VSS, IEEE 1583

Paper Record: Paper ballot image or summary that is a copy of the electronic record and that is verified by a voter. See also *ballot image*.

Association: voting, security
Source: no attribution

Partisan Office: Elected office for which candidates run as representatives of a political party.

Association: voting
Source: VSS, IEEE 1583

Pass/Fail Criteria: Decision factor or expected result used to determine if software or hardware passes a test case.

Association: testing
Source: IEEE 1583

Physical Configuration Audit (PCA): (1) *Inspection* that compares the voting system components submitted for qualification to the vendor's technical documentation and confirms that the documentation submitted meets the requirements of the Standards. As part of the PCA, the building of the executable system to ensure that the qualified executable release is built from the tested components is also witnessed. (2) Review, by the test authority, of the vendor's technical documentation, source code, and observation of the code compile.

Association: testing, voting
Source: (1) VSS, (2) IEEE 1583

Precinct Count: Counting of ballots on automatic tabulating equipment provided by the election authority in the same precinct polling place in which those ballots have been cast.

Association: voting
Source: IL Statutes

Point Size: Method of measuring type, where the size of a font is measured from the top of the tallest character to the bottom of the lowest character.

Association: human factors, typography
Source: no attribution

Political Subdivision: Any unit of government, such as counties and cities but often excepting school districts, having authority to hold elections for public offices or on ballot issues.

Association: voting
Source: VSS

Polling Location: Physical address of a *polling place*.

Association: voting

Source: VSS, IEEE 1583

Polling Place: Facility that is staffed by poll workers and equipped with voting equipment, to which voters from a given precinct come to cast in-person ballots. See also *voting station*.

Association: voting

Source: VSS, IEEE 1583

Precinct: Administrative division representing a geographic area in which voters cast ballots at the same polling place. Voters casting absentee ballots may also be combined into one or more administrative absentee precincts for purposes of tabulating and reporting votes. Generally, voters in a polling place precinct are eligible to vote in a general election using the same ballot format. In some jurisdictions, however, the ballot formats may be different due to split precincts or required ballot rotations within the precinct.

Association: voting

Source: VSS, IEEE 1583

Precision: (1) Extent to which a given set of measurements of the same sample agree with their mean. Thus, precision is commonly taken to be the standard deviation estimated from sets of duplicate measurements made under conditions of repeatability, that is, independent test results obtained with the same method on identical test material, in the same laboratory or test facility, by the same operator using the same equipment in short intervals of time. (2) Degree of refinement in measurement or specification, especially as represented by the number of digits given.

Association: testing, statistics

Source: IEEE 1583

Pre-Standard: Document that is adopted provisionally by a standardizing body and made available to the public in order that the necessary experience may be gained from its application on which to base a standard.

Association: standardization

Source: ISO Guide 2-4

Primary Election: Election held to determine which candidate will represent a political party in the general election. Some states have an *open primary*, while others have a *closed primary*. Sometimes elections for nonpartisan offices and ballot issues are held during primary elections.

Association: voting

Source: VSS

Primary Presidential Delegation Nominations: Primary election in which voters choose the delegates to the Presidential nominating conventions allotted to their states by the national party committees.

Association: voting
Source: VSS

Privacy: Voting system is said to provide privacy when it makes it impossible for others to find out how the voter voted.

Association: security, voting
Source: no attribution

Private Key: The secret part of an asymmetric key pair that is typically used to digitally sign or decrypt data.

Association: security
Source: NIST SP 800-63

Profile: (1) Subset of a standard for a particular constituency that identifies the features, options, parameters, and implementation requirements necessary for meeting a particular set of requirements. (2) Specialization of a standard for a particular context, with constraints and extensions that are specific to that context.

Association: standardization
Source: (1) ISO 8632, (2) no attribution

Provisional Ballot: Ballot provided to individuals who claim they are eligible to vote but whose eligibility cannot be confirmed when they present themselves to vote.

Once voted, such ballots are not included in the tabulation until after the voter's eligibility is confirmed. See also *challenged ballot*.

Association: voting
Source: VSS, IEEE 1583, NASS

Public Information Package (PIP): Data to be published openly and made available to all without let or hindrance, irrespective of need-to-know.

Association: testing
Source: no attribution

Public Key: Public part of an asymmetric key pair that is typically used to verify signatures or encrypt data.

Association: security
Source: NIST SP 800-63

Public Key Certificate: Digital document issued and digitally signed by the private key of a Certification Authority that binds the name of a subscriber to a public key. The certificate indicates that the subscriber identified in the certificate has sole control and access to the private key.

Association: security
Source: NIST SP 800-63

Public Network Direct Record Electronic (DRE) Voting System: Form of DRE voting system that uses electronic ballots and transmits vote data from the polling place

to another location (such as a central count facility) over a public network beyond the control of the election authority.

Association: voting

Source: VSS

Punchcard Voting System: Voting system where votes are recorded by means of punches made in voting response fields designated on one or both faces of a ballot card or series of cards.

Association: voting

Source: VSS, IEEE 1583

Q

Qualification Number: Deprecated. A number issued by NASED (National Association of State Election Directors) to a system that has been tested by certified Independent Test Authorities for compliance with the qualification test standards. Issuance of a Qualification Number indicates that the system qualifies for certification process of states that have adopted the Standards. Note: Qualification Numbers for Voting Systems that were qualified for compliance to the 1990 Voting System Standards are still valid. Voting Systems that were qualified for compliance to the 2002 Voting System Standards will need to be assigned an EAC Certification number.

Association: testing, voting

Source: VSS

Qualification Test Report: Deprecated, replaced by *Test Report for EAC Certification*.

Association: testing, voting

Source: VSS, NIST HB150

Qualification Testing: Deprecated, replaced with *Voting System Testing*. Examination and testing of a computerized voting system by using qualification test standards to determine if the system complies with the qualification performance and test standards and with its own specifications. This process occurs prior to state certification.

Association: testing, voting

Source: VSS

Quality Assurance Plan: Document that identifies the system and actions required to provide adequate assurance that an item or product conforms to the documented technical requirements.

Association: testing

Source: IEEE 1583

Quality Control: Operational techniques and activities that are used to fulfill requirements for quality.

Association: testing

Source: NIST HB 150

Quality Manual: Document stating the quality policy and describing the quality system of an organization.

Association: testing, software engineering

Source: NIST HB 150

R

Race: Contest between candidates.

Association: voting

Source: no attribution

Ranked Order Voting: Practice that allows voters to rank candidates in a contest in order of choice: 1, 2, 3 and so on. It takes a majority to win. If anyone receives a majority of the first choice votes, that candidate wins that election. If not, the last place candidate is deleted, and all ballots are counted again, but this time each ballot cast for the deleted candidate counts for the next choice candidate listed on the ballot. The process of eliminating the last place candidate and recounting the ballots continues until one candidate receives a majority of the vote. The practice is also known as instant runoff voting, preferences or preferential voting, or choice voting.

Association: voting

Source: VSS, IEEE 1583

Read Ballot: Ballot that has been processed but may or may not be counted.

Association: voting

Source: no attribution

Recall Issue with Options: Process that allows voters to remove their elected representatives from office prior to the expiration of their terms of office. Often, the recall involves not only the question of whether a particular officer should be removed from office, but also the question of naming a successor in the event that there is an affirmative vote for the recall.

Association: voting

Source: VSS

Recertification: State examination, and possibly the retesting of a voting system that was modified subsequent to receiving state certification. The object of this process is to determine if the modification still permits the system to function properly in accordance with state requirements.

Association: voting

Source: VSS, IEEE

Record: (n) Data that are preserved by a voting system, not necessarily in any particular form. (v) To preserve such data.

Association: voting

Source: no attribution

Records: Recordings of evidence of activities performed or results achieved (e.g., forms, reports, test results), which serve as a basis for verifying that the organization and the information system are performing as intended. Also used to refer to units of related data fields (i.e., groups of data fields that can be accessed by a program and that contain the complete set of information on particular items).

Association: security

Source: NIST SP 800-53

Recount: Process conducted for verifying the votes counted in an election.

Association: voting

Source: no attribution

Referendum: Contest between two (or more) choices in response to a question (e.g., bond issue, recall, retention of a judge in office, proposed amendment).

Association: voting

Source: NIST HF Rpt.

Repeatability: Ability to obtain independent test results by using the same testing method on identical test items in the same testing laboratory by the same operator using the same equipment within short intervals of time.

Association: testing, conformity assessment

Source: ISO 5725

Report: (n) Printed record, formatted for human readability, that is produced by a voting system. (v) to produce such a record.

Association: voting

Source: no attribution

Reproducibility: Ability to obtain test results with the same test method on identical test items in different testing laboratories with different operators using different equipment.

Association: testing, conformity assessment

Source: ISO 5725

Requirement: Provision that conveys criteria to be fulfilled. See also *compliance point*

Association: testing, standardization

Source: NIST HB 150

Residual Vote: Total number of votes that cannot be counted for a specific contest. There may be multiple reasons for residual votes (e.g., overvoting in a contest, failure to cast ballot before leaving polling place).

Association: voting, human factors

Source: NIST HF Rpt.

Risk Assessment: Process of identifying the risks to system security and determining the probability of occurrence, the resulting impact, and additional safeguards that would mitigate this impact.

Association: security

Source: NIST SP 800-30

Rolloff: Difference between number of votes cast for contests in the higher offices on the ballot and the number cast for contests that are lower on the ballot. It sometimes referred to as voter fatigue.

Association: voting, human factors

Source: NIST HF Rpt.

Runoff Election: Election to select a winner following a primary, or sometimes a general election, in which no candidate in the contest received the required minimum percentage of the votes cast. The two candidates receiving the most votes for the race in question proceed to the runoff election.

Association: voting

Source: VSS, IEEE 1583

S

Second Chance Voting: Provides that voters are notified when their ballots contain errors and are given a chance to correct them. Required by HAVA 2002.

Association: voting

Source: NASS

Secret Key: *Cryptographic key* that is used with a *symmetric cryptographic algorithm* that is uniquely associated with one or more entities and is not be made public. The use of the term “secret” in this context does not imply a classification level, but rather implies the need to protect the key from disclosure.

Association: security

Source: NIST SP 800-57

Section 508: Amendment by Congress in 1998, to the Rehabilitation Act to require federal agencies to make their electronic and information technology accessible to people with disabilities. Section 508 was enacted to eliminate barriers in information technology.

Association: HF: accessibility

Source: no attribution

Security Controls: Management, operational, and technical controls (i.e., safeguards or countermeasures) prescribed for an information system to protect the confidentiality, integrity, and availability of the system and its information.

Association: security

Source: FIPS 199, NIST SP 800-53

Specification, Technical: Document that prescribes technical requirements to be fulfilled by a product, process or service.

Association: standardization

Source: ISO Guide 2-4

Split Precinct: Precinct containing more than one ballot format in order to accommodate a contiguous geographic area served by the precinct that contains more than one election district.

Association: voting

Source: VSS, IEEE 1583

Spoiled Ballot: Ballot that has been voted but will not be cast.

Association: voting

Source: no attribution

Standard: Document established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

Association: standardization

Source: ISO Guide 2-4

Standard, Product: Standard that specifies requirements to be fulfilled by a product or a group of products, to establish its fitness for purpose. A product standard may include, in addition to the fitness for purpose requirements, directly or by reference, aspects such as terminology, sampling, testing, packaging, and labeling and sometimes processing requirements.

Association: standardization

Source: ISO Guide 2-6

Standard, Testing: Standard that is concerned with test methods, sometimes supplemented with other provision related to testing, such as sampling, use of statistical methods, or sequence of test.

Association: standardization

Source: ISO Guide 2-6

Standard on Data to Be Provided: Standard that contains a list of characteristics for which values or other data are to be stated for specifying the product, process, or service.

Association: standardization

Source: ISO Guide 2-4

Straight Party Voting: Mechanism by which voters are permitted to cast a vote indicating the selection of all candidates on the ballot for a single political party.

Association: voting

Source: VSS, IEEE 1583

State Certification: State examination and possibly testing of a voting system to determine its compliance with state laws, regulations, and rules and any other state requirements for vote systems.

Association: testing, conformity assessment, voting

Source: VSS

Support Software: Software that aids in the development or maintenance of other software, for example, compilers, loaders and other utilities.

Association: IT

Source: VSS, IEEE 1583

Symmetric (Secret) Encryption Algorithm: Encryption algorithms using the same secret key for encryption and decryption.

Association: security

Source: NIST SP 800-49

T

Tabulation: See *Count*.

Association: voting

Source: VSS, IEEE 1583

Tabulator: Device that counts votes.

Association: voting

Source: no attribution

Technical Data Package: Vendor documentation relating to the voting system that shall be submitted with the system as a precondition of qualification testing.

Association: testing, voting

Source: VSS

Telecommunications: Transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

Association: IT

Source: IEEE 1583

Test: Technical operation that consists of the determination of one or more characteristics of a given product, process or service according to a specified procedure.

Association: testing

Source: ISO Guide 2-4, NIST HB 150

Test Campaign: Sum of the work by a *VSTL* on a single product or system from contract through test plan, conduct of testing for each requirement (including hardware, software, and systems), reporting, archiving, and responding to issues afterwards.

Association: testing, voting

Source: NIST HB 150-22

Test Case Specification: Document identifying the specific inputs and expected result for each test identified in the test plan.

Association: testing

Source: IEEE 1583

Test Design Specification: Expanded detail of the test approach identified in the test plan for the related tests.

Association: testing

Source: IEEE 1583

Test Method: Specified technical procedure for performing a test.

Association: testing, conformity assessment

Source: ISO Guide 2

Test Plan: Document created prior to testing that outlines the scope and nature of testing, items to be tested, test approach, resources needed to perform testing, test tasks, risks and schedule.

Association: testing, conformity assessment

Source: IEEE 1583

Testing: Determination of one or more characteristics of an object of conformity assessment, according to a procedure. Testing typically applies to materials, products, or processes.

Association: testing, conformity assessment

Source: ISO 17000

Testing Authority: Organization that performs qualification testing and produces qualification test reports. See also *Voting System Testing Laboratory*.

Association: testing, conformity assessment

Source: no attribution

Test Report for EAC Certification: Report of results of independent testing of a voting system indicating the data testing was completed, the specific system version tested, and the scope of tests conducted.

Association: testing, voting

Source: VSS, NIST HB 150

Touch Screen Voting Machine: Machine that utilizes a computer screen whereby a voter executes that voter's choices by touching designated locations on the screen and that then tabulates those choices.

Association: voting

Source: ME Statutes

Traceability: Ability to relate a property of the result of a measurement or the value of a standard to stated references.

Association: testing

Source: VIM

Type font: Type of a given size and style, e.g., 10-point Bodoni Modern.

Association: human factors

Source: ANSI

U

Uncertainty: Parameter, associated with the result of a measurement that characterizes the dispersion of the values that could reasonably be attributed to that which is being measured.

Association: testing

Source: VIM, NIST HB 150

Undervote: (1) Occurs when the number of alternatives selected by a voter in a contest is less than the maximum number allowed for that contest. (2) Practice of voting for less than the total number of election contests listed on the ballot, or of voting for less than the number of positions to be filled for a single office (i.e., A person would undervote if a contest required the selection of three out of a given number of candidates, and the voter chose only two candidates). Also known as undervoting.

Association: voting

Source: (1) NIST HF Rpt. (2) VSS, IEEE 1583, NASS

Usability: Effectiveness, efficiency and satisfaction with which a specified set of users can achieve a specified set of tasks in a particular environment. Usability in the context of voting system standards refers to voters being able to cast valid votes as they intended quickly, without errors and with confidence that their ballot choices as marked were recorded correctly. It also refers to the usability of the setup of voting equipment for the election and the running of the election by poll workers and election administrators.

Association: Human factors, HF: usability

Source: ISO 9241, NIST HF Rpt

Usability Testing: Encompasses a range of methods that examine how users in the target audience actually interact with a system, in contrast to analytic techniques such as usability inspection.

Association: human factors, HF: usability

Source: Usability First Usability Glossary

User Documentation: See Voting Equipment User Documentation.

Association: vote, test

Source: IEEE 1583

V

Valid Vote: Vote from a *ballot* or *ballot image* that conforms to jurisdiction dependent criteria for accepting or rejecting entire ballots, such as stray marks policies and voter eligibility criteria, in a contest that was not *overvoted*.

Association: voting

Source: no attribution

Validation: Process of evaluating a system or component during or at the end of the development process to determine whether it satisfies specified requirements.

Association: testing

Source: VSS

Verification: Process of evaluating a system or component to determine whether the products of a given development phase satisfy the conditions (such as specifications) imposed at the start of the phase.

Association: testing

Source: VSS

Verification and Validation (V&V): Process of determining whether requirements for a system or component are complete and correct, the products of each development phase fulfill the requirements or conditions imposed by the previous phase, and the final system or component complies with specified requirements.

Association: testing

Source: IEEE 1583

Video Ballot: *Electronic voter interface* which presents ballot information and voting instructions as video images. See also *ballot*.

Association: voting, human factors, HF: accessibility

Source: FL Statutes

Vote for N of M: Ballot choice in which voters are allowed to vote for a limited number of *candidates* for a single office from a larger field of candidates.

Association: voting

Source: VSS, IEEE 1583

Voted Ballot: *Ballot* that a voter has finished filling in, but has not yet cast or spoiled.

Association: voting

Source: no attribution

Voter Registration System: Set of processing functions and data storage that maintains records of eligible voters. This system generally is not considered a part of a Voting System subject to the 2002 Voting System Standards.

Association: voting

Source: VSS

Voter Verified Audit Record: (1) Human-readable printed record of all of a voter's selections presented to the voter before the vote is cast. (2) Printed version of the ballot that voters may view and check for accuracy before their votes are cast. See also *Voter Verified Record or Voter Verified Paper Trail*.

Association: voting

Source: (1) IEEE 1583, (2) NASS

Voter-Verified Paper Trail (VVPT): See *Voter Verified Audit Record*.

Voting Environment: Aspects of the voting milieu outside of the voting system that are encountered by voters, e.g., ramps, lighting, noise, temperature, electro-magnetic interference. See also *voting equipment operational environment*.

Association: human factors, voting

Source: no attribution

Voting Equipment: Any mechanical, electromechanical, or electronic components of a voting system. See also *Electronic Voting Equipment*.

Association: voting

Source: no attribution

Voting Equipment Operational Environment: All software, hardware (including facilities, furnishings and fixtures), materials, documentation, and the interface used by the election personnel, maintenance operator, poll worker, and voter, required for voting equipment operations. See also *voting environment*.

Association: voting

Source: IEEE 1583

Voting Equipment Operations Procedures: Ordered steps that election personnel, poll workers or voters follows to perform the tasks for each operational environment.

Association: voting

Source: IEEE 1583

Voting Equipment User Documentation: Electronic or printed material that provides information for the election officials or voters.

Association: voting

Source: IEEE 1583

Voting Machine: Mechanical or electronic equipment for the direct recording and tabulation of votes. See also *voting system*.

Association: voting

Source: OH Statutes

Voting Officials: Term used to designate the group of people associated with elections, including election personnel, poll workers, ballot designers and those responsible for the installation, operation and maintenance of the voting systems.

Association: voting

Source: no attribution

Voting Position: Specific response fields on a ballot where the voter indicates the selection of a candidate or ballot proposition.

Association: voting

Source: VSS, IEEE 1583

Voting Process: Entire array of procedures, people, resources, equipment and locales by which elections are conducted

Association: voting

Source: no attribution

Voting Station: Location within the *polling place* where voters may record their votes. A voting station includes the voting booth or enclosure and the vote-recording device.

Association: voting

Source: VSS, IEEE 1583

Voting System: Combination of mechanical, electromechanical, or electronic equipment and any corresponding documentation. It includes the software required to program, control, and support the equipment that is used to define ballots; to cast and count votes; to report and/or display election results; and to maintain and produce all audit trail information. A voting system may also include the transmission of results over telecommunication networks. It additionally includes the associated documentation used to operate the system, maintain the system, identify system components and their versions, test the system during its development and maintenance, maintain records of system errors and defects, and determine specific changes made after system qualification. See also *electronic voting system*, *voting equipment*, *voting machines*.

Association: voting

Source: VSS

Voting System Testing: Examination and testing of a computerized voting system by using test methods to determine if the system complies with the requirements in the Voting System Standards and with its own specifications. This process occurs prior to state certification.

Association: testing, voting

Source: VSS

Voting System Testing Laboratory (VSTL): Testing laboratory accredited by the National Voluntary Laboratory Accreditation Program in the field of voting systems testing. See also *testing authority*.

Association: testing

Source: NIST HB 150-22

VVPAT-Ballot Box: Ballot box containing the paper record.

Association: security, voting

Source: no attribution

VVPAT-Display: Transparent covering over the paper record printed by the DRE-VVPAT. It permits a voter to inspect the paper record but prevents the voter from physically handling the paper record.

Association: security, voting

Source: no attribution

VVPAT-Printer: Printing capability of the voting system, including the printer and any associated device involved in printing the paper records and transferring them to ballot boxes.

Association: security, voting

Source: no attribution

W

Write-in Voting: Means to cast a vote for an individual not listed on the ballot. Voters may do this by using a marking device to physically write their choice on the ballot or they may use a keypad, touch screen or other electronic means to indicate their choice.

Association: voting

Source: VSS, IEEE 1583

Workspace: See *voting station*.

Association: voting

Source: VSS

Appendix A: Sources

Definitions in this Glossary are either extracted from or based on the following source:

44 U.S.C.	United States Code, Title 44, Chapter 35, Information Security, Section 3542, Definitions.
ACM SIGCHI	ACM's Special Interest Group on Computer-Human Interaction, http://www.acm.org/sigchi/ (February 2005).
ADA	Americans with Disabilities Act of 1990.
ANSI	American National Dictionary for Information Processing Systems, American National Standards Committee X3, Information Processing Systems, 1982.
CA Statutes	California's Senate Bill No 1438.
electionline	http://electionline.org/ , (March 2005).
FIPS 140-2	Federal Information Processing Standard 140-2, Security Requirements for Cryptographic Modules, May 2001.
FIPS 199	Federal Information Processing Standard 199, Standards for Security Categorization of Federal Information and Information Systems, December 2003.
FIPS 201	Federal Information Processing Standard 201, Personal Identity Verification for Federal Employees and Contractors, February 2005.
FL Statutes	Florida Statutes: Section 97.021(3) and Section 101.56062(1)(n) Standards for accessible voting.
HAVA	Help America Vote Act of 2002 - Public Law 107-252.
IEA	International Ergonomics Association, http://www.iea.cc/ , (February 2005).
IEEE 1583	IEEE P1583/D5.3.2 Draft Standard for the Evaluation of Voting Equipment, December 6, 2004.
IL Statutes	Illinois Public Act 093-0574.
ISO 5725	ISO/IEC 5725:1994 Accuracy (trueness and precision) of measurement methods and results.

ISO 9241	ISO/IEC 9241:1997 Ergonomic requirements for office work with visual display terminals (VDT).
ISO 17000	ISO/IEC 17000:2004 Conformity assessment -- Vocabulary and general principles.
ISO Guide 2-4	ISO/IEC Guide 2:2004 Standardization and related activities - General vocabulary.
ISO Guide 2-6	ISO/IEC Guide 2:1996 Standardization and related activities - General vocabulary.
ME Statutes	Maine LD 1759 Enacted 4/22/2004.
NASS	National Association of Secretaries of State Election Reform Key Terms, http://www.nass.org/Election%20Reform%20Key%20Terms.pdf (February 2005).
NIST HB 143	NIST Handbook 143 State Weights and Measures Laboratories Program Handbook.
NIST HB 150	NIST Handbook 150:2001 NVLAP Procedures and General Requirements.
NIST HF Rpt.	NIST Special Publication 8500-256 Improving the Usability and Accessibility of Voting Systems and Products, May 2004.
NIST SP 800-30	NIST Special Publication 800-53 Risk Management Guide for Information Technology Systems, July 2002.
NIST SP 800-49	NIST Special Publication 800-49 Federal S/MIME V3 Client Profile, November 2002.
NIST SP 800-53	NIST Special Publication 800-53 Recommended Security Controls for Federal Information Systems, Appendix B, Glossary.
NIST SP 800-59	NIST Special Publication 800-59 Guideline for Identifying an Information System as a National Security System, August 2003.
NIST SP 800-63	NIST Special Publication 800-63 Electronic Authentication Guideline: Recommendations of the National Institute of Standards and Technology, June 2004.
OH Statutes	Ohio HB-262 enacted 5/7/2004.

OMB A130	OMB Circular A-130, Appendix III.
Section 508	The Rehabilitation Act Amendments, Section 508.
Usability Glossary	Usability First Usability Glossary, http://www.usabilityfirst.com/glossary/main.cgi , (February 2005).
VIM	The ISO International Vocabulary of Basic and General Terms in Metrology (VIM), 1994.
VSS	Voting Systems Standards of 2002 (Federal Election Commission), Volumes I and II.
Whatis.com	Whatis.com, IT Encyclopedia, http://whatis.techtarget.com/definition/0,,sid9_gci491925,00.html (February 2005).
WordNet	WordNet ®2.0, © 2003 Princeton University.

Appendix B: List of Associations

Conformity Assessment
Human Factors (HF)
HF: accessibility
HF: usability
IT - Information Technology
Security
Software Engineering
Standardization
Testing
Typography
Voting

Appendix C: List of Deprecated Terms

The following terms are being phased out and replaced by newer terms. Note that there is a transition period where both terms are in use at the same time.

Deprecated Term	Replaced by
Certification Testing	State Certification
Electronic Cast Vote Record	Cast Vote Record
Independent Testing Authority	Voting System Testing Laboratory
Qualification Number	no replacement at this time
Qualification Test Report	Test Report for EAC Certification
Qualification Testing	Voting System Testing